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ABSTRACT

A survey, designed to assist in the development of an inventory of fiscal competencies that academic administrators perceive to be needed if they are to be effective contributors to the budgetary process and to seek answers to the question of the existence of a widespread need for the development of in-service training programs for academic administrators, was administered to administrators of 13 Colorado postsecondary institutions. The study analyzed responses from 319 administrators who were asked to respond to 41 proposed fiscal competencies relating to budget requests, proper expenditure of appropriated resources, and translation of educational planning into fiscal impacts. The results of the survey demonstrated an overall need by administrators to significantly upgrade developing in-service curricula customized to one of three administrative levels, one of three institutional types, and two institutional sizes. The results can be used in any public postsecondary institution operating in a budgetary environment characterized by line item incremental budgets, a strong executive or legislative branch of government, and state-wide educational coordination with some state-level governance. A bibliography is provided. (Author/JMD)

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DEVELOPMENT OF AN INVENTORY OF FISCAL COMPETENCIES FOR COLORADO POSTSECONDARY ACADEMIC ADMINISTRATORS

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A Contributed Paper To The
18th Annual Forum Of The Association
For Institutional Research

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ABSTRACT

Postsecondary educational institutions must seek ways to increase their effectiveness in both articulating resource needs and in expending their appropriations. Academic administrators are an underutilized resource which may require in-service training to become an effective participant in the budgetary process.

The study analyzed responses from a population of 319 Colorado postsecondary academic administrators who were asked to respond to 41 proposed fiscal competencies relating to budget requests, proper expenditure of appropriated resources, and translation of educational planning into fiscal impacts.

The results of the survey demonstrated an overall need by academic administrators to significantly upgrade their fiscal skills. Basic information was produced which is useful in developing in-service curricula customized to one of three administrative levels, one of three institutional types, and two institutional sizes.

The results can be used in any public postsecondary institution operating in a budgetary environment characterized by line item incremental budgets, a strong executive or legislative branch of government, and state-wide educational coordination with some state-level governance.

INTRODUCTION

American higher education during the 1970's is facing flat or declining enrollments, a growing excess capacity in educational physical plant, and flat or declining proportions of public funds allocated to higher education (Glenny, 1971). The situation in Colorado is similar to national trends, and the competition for public funds is increasing. Postsecondary educational institutions must produce rational budget narrative, and they must demonstrate competent use of appropriated resources if institutional funding bases are to be protected. The general administrative staff at most educational institutions are frequently over-burdened when coping with the technical aspects of budget requests. As a result, fiscal articulation of institutional role, scope, and mission often occurs without adequate direction or planning. It is the belief of the researcher that effective involvement by academic administrators in the budgetary process could increase the quality of institutional budget requests and improve the management of resource expenditures. Involvement by academic administrators in the budgetary process, however, requires fiscal knowledge and skills which are not possessed by most academicians. Yet formal in-service training of administrators is rare (Fincher, 1972). The study was designed to assist in the development of an inventory of fiscal competencies which academic administrators perceive to be needed if they are to be effective contributors to

the budgetary process. The study was also designed to seek answers to the question of the existence of a widespread need for the development of in-service training programs for academic administrators.

Academic administrators at thirteen Colorado postsecondary institutions were asked to complete a survey instrument covering forty-one fiscal competencies. The respondents were asked to rate their perceived need and estimated present knowledge or skill level for each competency. Responses were noted on identical five-point Likert scales,[1] one scale each for perceived need and estimated present level. Response data for each competency were analyzed by three administrative levels (I-department, II-division/school, III-institution), three institutional types (two-year, four-year, university), and two sizes (large institutions - greater than 5,000 students; small institutions - less than 5,000 students). Analysis of variance was utilized to provide administrative level, institutional size, and institutional type main effect statistics. Mean score data developed from special Statistical Package for the Social Sciences computer runs were subjected to Scheffe' means difference tests. The ANOVA and Scheffe' procedures provided the basis for statistical inferences concerning four questions which the survey attempted to answer:

Question One - Is there any difference between current skills or knowledge levels of academic administrators and the levels perceived to be needed to participate effectively in the budgetary process (i.e., perceived need vs. estimated present level)?

Question Two - Are the perceived fiscal competency inventories different for each management level at an institution? Specifically, are there three unique sets of fiscal competencies for departmental, division/school, and institutional level (top management) administrators?

Question Three - Are the perceived fiscal competency inventories different depending upon the type of institution (two-year, four-year, university)?

Question Four - Are the perceived fiscal competency inventories different depending upon institutional size? Specifically, are the perceived inventories for institutions with less than 5,000 students different than the perceived inventories for institutions with greater than 5,000 students?

SUMMARY OF FINDINGS

Overall Administrative Level Differences

Significantly different responses (perceived need versus estimated present competency levels) were found for 38 of the 41 competencies without consideration of institutional type, administrative level, or institutional size. Academic administrators reported that they felt comfortable with competencies relating to faculty travel, the economics of class scheduling, and clerical staffing needs for middle and upper administration. The remaining 38 competencies were, however, distributed across the major phases of the budgetary process:

a. Developing institution-wide budget priorities;
b. Developing departmental, division, or school level budget priorities (assuming the existence of institutional priorities);
c. Executing operating budgets;
d. Developing fiscal impacts from educational planning.

The fiscal competencies are displayed in Table 1 where the general relationship between a given competency and one or more of the budgetary phases is shown. Also shown is a more detailed presentation of the results for each competency, by administrative level, without consideration of institutional size and type.

For example, Competency 29 addresses the development of fiscal impacts related to division/school goals. The survey

SUMMARY OF REPORTED NEED TO UPGRADE
FISCAL SKILLS - BY COMPETENCY
TABLE 1

COMPETENCY SURVEYED	BUDGET CYCLE EMPHASIS[a]	OVERALL DIFFERENCE SIGNIFICANT[b]	LEVEL I (OVERALL) NEED	LEVEL II (OVERALL) NEED	LEVEL III (OVERALL) NEED
1. Estimating Faculty Travel Budgets	C,B	NO	--	CA[c]	CA
2. Preparing Class Schedules	B,C	NO	--	CA	CA
3. Using Computer Dept. Budget Reports	C	YES	Detailed	CA	CA
4. Est. Clerical Staff (Div./School Level)	C	NO	--	CA	CA
5. Est. Clerical Staff (Dept. Level)	C,B	YES	Detailed	CA	CA
6. Est. Total Faculty Workload	D,B	YES	Detailed	General	CA
7. Dev. Request Budget Goals (Div./Sch.)	B,D	YES	General	Detailed	CA
8. Dev. Request Budget Goals (Dept.)	B,D	YES	Detailed	CA	CA
9. Dev. Fac. Eval./Sal. Admin. Process	C,D	YES	Detailed	CA	CA
10. Est. Total Instr. Fac. Required	D	YES	Detailed	Detailed	CA
11. Translating Approp. into Div./Sch. Budgets	C	YES	General	CA	CA

a/ A: Developing Institution Wide Budget Priorities
B: Developing Department, Division or School Request Budgets
C: Executing Operating Budgets
D: Relating Educational Planning and Fiscal Reality

b/ At .01 level or better

c/ CA = Currently Adequate

SUMMARY OF REPORTED NEED TO UPGRADE
FISCAL SKILLS - BY COMPETENCY
TABLE 1 (cont'd.)

	COMPETENCY SURVEYED	BUDGET CYCLE EMPHASIS[a/]	OVERALL DIFFERENCE SIGNIFICANT[b/]	LEVEL I (OVERALL) NEED	LEVEL II (OVERALL) NEED	LEVEL III (OVERALL) NEED
12.	Translating Approp. into Dept. Budgets	C	YES	Detailed	CA	CA
13.	Analysis of Request Budget Detail	B,A	YES	General	CA	CA
14.	Organizing Budget Narrative (Div./Sch.)	B	YES	General	Detailed	CA
15.	Organizing Budget Narrative (Dept.)	B	YES	Detailed	CA	CA
16.	Est. Total Academic Program Costs	D,A	YES	Detailed	Detailed	CA
17.	Administering Employee Due Process	A,C	YES	Detailed	Detailed	CA
18.	Alternatives: Dept. Budget Reductions	C,A	YES	Detailed	CA	CA
19.	Alternatives: Div./Sch. Budget Reductions	A,C	YES	General	CA	CA
20.	Est. Induced Workload Impacts	D,A	YES	General	General	CA
21.	Est. New Academic Program Costs	D,A	YES	Detailed	Detailed	CA
22.	Fac. Mix; Cost Implications (Est.)	B,C	YES	Detailed	Detailed	CA

a/ A: Developing Institution Wide Budget Priorities
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SUMMARY OF REPORTED NEED TO UPGRADE
FISCAL SKILLS - BY COMPETENCY
TABLE 1 (cont'd.)

	COMPETENCY SURVEYED	BUDGET CYCLE EMPHASIS[a]	OVERALL DIFFERENCE SIGNIFICANT[b]	LEVEL I (OVERALL) NEED	LEVEL II (OVERALL) NEED	LEVEL III (OVERALL) NEED
23.	Est. Existing Academic Program Costs	D,A	YES	General	General	CA
24.	Finding/Utilizing Enrichment Dollars	D,C	YES	General	General	CA
25.	Facilities Needs Estimating	D,A	YES	General	General	CA
26.	Capital Outlay Needs Est.	D,A	YES	Detailed	General	CA
27.	Developing Alternative Exp. Patterns	C,D	YES	General	General	CA
28.	Translating Academic Goals to $ Impacts	A,D	YES	General	General	CA
29.	Trans. Inst. Goals into Div./School $	C	YES	General	Detailed	Detailed
30.	Trans. Inst. Goals into Dept. Dollars	C	YES	Detailed	CA	CA
31.	Trans. Long Term Acad. Plng. into Dollars	D,A	YES	General	General	Detailed
32.	Knowledge of State Fiscal Rules	C,D	YES	General	CA	CA
33.	Knowledge of State Budget Cycle	A,D	YES	General	CA	CA

a/ A: Developing Institution Wide Budget Priorities
B: Developing Department, Division or School Request Budgets
C: Executing Operating Budgets
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b/ At .01 level or better

c/ CA = Currently Adequate

SUMMARY OF REPORTED NEED TO UPGRADE
FISCAL SKILLS - BY COMPETENCY
TABLE 1 (cont'd.)

	COMPETENCY SURVEYED	BUDGET CYCLE EMPHASIS[a/]	OVERALL DIFFERENCE SIGNIFICANT[b/]	LEVEL I (OVERALL) NEED	LEVEL II (OVERALL) NEED	LEVEL III (OVERALL) NEED
34.	Knowledge of Campus Budget Cycle	A,D	YES	General	Detailed	CA
35.	Campus Pres. Budget Philosophy	A,B	YES	General	Detailed	CA
36.	Oral Budget Presentation Techniques	A,B	YES	General	General	CA
37.	Gov.'s Budget Philosophy	A,B	YES	General	General	Detailed
38.	Legislature's Budget Philosophy	A,B	YES	General	General	Detailed
39.	Classified Service Pers. Procedures	C	YES	General	General	CA
40.	Student Credit Hour Determination	B,C	YES	Detailed	CA	CA
41.	Computerized Acad. Program Cost Models	D,A	YES	General	General	CA

a/ A: Developing Institution Wide Budget Priorities
B: Developing Department, Division or School Request Budgets
C: Executing Operating Budgets
D: Relating Educational Planning and Fiscal Reality

b/ At .01 level or better

c/ CA = Currently Adequate

results indicated that perceived needs were significantly greater than estimated current competencies at all three levels of academic administration. Also shown are reported need in the detailed knowledge range for level II and level III administrators and an upgrade to the general knowledge range for level I administrators.

Level I administrators reported a need for detailed skills in 15 competencies relating to first level administration. These competencies focused upon monitoring and executing departmental budgets with an emphasis towards being comfortable with computerized reports, developing or estimating possible changes in support staff (i.e., budget reductions), capital outlay, and facilities needs; a need to understand more fully the economics of total faculty workload and full time/part time mix, personnel due process, and the development of departmental budget request (dollars and narrative) based upon institution-wide priorities and division/school goals. Level I administrators also expressed a need to be able to determine the costs of academic programs before they are implemented.

Level I administrators expressed a need for general skills or knowledge in 23 additional competencies. The majority of these competencies relate to middle and upper level administrative planning and budgeting processes. Significantly, level I administrators expressed a general level need to understand the technical aspects of campus request budget documents, including

many aspects of the overall budgetary cycle. Such an interest suggests a great need for increased communication between campus budget personnel and the academic administrative ranks.

Level II administrators reported a need for detailed skills or knowledge for 12 competencies. These competencies cover the detailing of faculty workload and total teaching staff requirements, developing budget goals and narrative, employee due process, new academic program costing, and translating of goals into fiscal statistics. Level II administrators also expressed a need to upgrade their knowledge of the campus budgetary cycle and to become much more aware of the budget philosophy of the chief executive officer of the campus.

Currently unrealized general skills/knowledge needs were reported by level II administrators for 12 additional competencies. Existing academic program costs, facilities needs, finding/using enrichment monies, general changes to current operating budgets (development and implementation), fiscal implications of long range academic planning, and knowledge of the state-level budgetary process reflect the general-level interest of level II administrators.

Level III administrators (academic vice presidents and their staffs ; campus chancellors of multi-campus systems) reported a need to become highly proficient in translating institutional priorities into the fiscal aspects of division/school/department objectives. Level III administrators

also expressed a great need to become highly knowledgeable of the budget analysis philosophy of external appropriating agencies and to significantly upgrade their expertise in the oral presentation of budget requests.

An unanticipated response by top level administrators related to computerized academic program costing models. The perceived need and estimated present skill level scores were nearly in the "cursory need" range and the differences were not statistically significant.

Additional Refinements - Institutional Size, Type (Table 2)

Survey results for 19 competencies indicated that for any in-service training program, additional refinements might be made with respect to institution type (two-year colleges, four-year colleges, and universities), or institution size (small institutions were less than 5,000 students).

Senior academic administrators in small institutions emphasized the greatest need for better understanding departmental budget status reports, while all levels of small institution administrators reported a greater need to come to grips with faculty workload determining and estimating techniques.

Both small school administrators (all levels) and level I two-year and four-year college administrators reported a need for additional expertise in understanding the financial implications of division/school academic goals.

SUMMARY OF ADJUSTMENTS TO NEED RESPONSES DUE TO
INSTITUTIONAL TYPE AND SIZE
TABLE 2

	COMPETENCY REQUIRING MORE INTENSIVE TREATMENT	MORE INTENSIVE TREATMENT DUE TO INSTITUTIONAL TYPE	MORE INTENSIVE TREATMENT DUE TO INSTITUTIONAL SIZE
2:	Class Scheduling	--	Small School (Level III; if used in curriculum)
3:	Using Computer Budget Status Reports	--	Small School (Level III)
4:	Div./School Clerical Staff (Est.)	2 yr. & 4 yr.; Level I (if used in curriculum)	--
6:	Estimating Total Fac. Workload	--	Small School (All Levels)
7:	Dev. Div/Schools Request Budget Goals	Level I - 2 yr. & 4 yr. Administrators	Small School (All Levels)
9:	Dev. Fac. Sal. Admin. Process	Level III - 2 yr. & 4 yr. Administrators	Large School (Level II)
11:	Translating Approp. into Operating Budgets (Div./School)	All 2 yr. & 4 yr. Admin. (Particularly Level II)	--
14:	Organizing Budget Narrative (Div./School)	--	Large School (Level II)
17:	Admin. Employee Due Process	All 4 yr. Administrators	Large School (Level II)
19:	Alternatives: Div./School Budget Reductions	University (Level I)	Large School (Level II)
22:	Faculty Mix; Cost Impact	--	Large School (Level II)
23:	Est. Existing Acad. Program Costs	--	Large School (Level II)

SUMMARY OF ADJUSTMENTS TO NEED RESPONSES DUE TO
INSTITUTIONAL TYPE AND SIZE
TABLE 2 (cont'd.)

	COMPETENCY REQUIRING MORE INTENSIVE TREATMENT	MORE INTENSIVE TREATMENT DUE TO INSTITUTIONAL TYPE	MORE INTENSIVE TREATMENT DUE TO INSTITUTIONAL SIZE
27:	Dev. Alt. Exp. Patterns	--	Large School (Level II)
28:	Trans. Academic Goals into Dollars	--	Large School (Level II), and Small School (Level III)
30:	Trans. Inst. Goal into Dept. Dollars	--	All Large School Administrators
31:	Trans. Long Range Acad. Plng. to Dollars	--	Large School (Level II)
32:	Knowledge of State Fiscal Rules	All 2 yr. & 4 yr. Admin.	--
33:	State (External) Budget Cycle	All 2 yr. Administrators	--
34:	Campus Budget Cycle	All 2 yr. Administrators	--

Large institution (level II) as well as two-year and four-year level III administrators required additional help in coping with faculty evaluation and salary administration techniques. All two-year and four-year college administrators reported a desire to know more about how campus appropriations are translated into operating budgets, while large institution (level II) administrators were concerned about organizing and writing better budget narratives.

Employee due process and its fiscal implications worried large institution (level II) administrators, while university and large institution administrators required greater skill in coping with campus budget reductions.

Large institution (level II) administrators agreed that they must improve their ability to handle the economics of faculty mix and total existing program costs, as well as be able to develop alternative expenditure patterns when confronted with flat or declining appropriations.

Translating long range academic planning into budgetary implications concerned level II large institution administrators, while all two-year and many four-year college administrators would like more training related to state fiscal rules and both campus and state-level budgetary processes.

Finally, narrative responses indicated that any in-service training program should include a brief, elementary introduction to governmental accounting, management by objectives techniques, and cost-benefit analysis procedures.

CONCLUSIONS AND IMPLICATIONS

Postsecondary educational accountability has become an operational reality, both nationally and in the state of Colorado. The accountability mechanisms have manifested a need for educational administrators to become more knowledgeable about fiscal processes relating to appropriations requests and expenditures. This study sought to determine if there was a general need to upgrade the current fiscal competencies of academic administrators and, if the need was evident, to also identify the competencies in which the academic administrators felt the need for improvement.

The findings of the survey display a widespread need for fiscal skills upgrading among Colorado postsecondary academic administrators. In many cases the need is for detailed knowledge or skill levels. In many others the need is to upgrade academic administrative skills from cursory or nearly cursory levels to sound, general levels of competence.

The findings identified several fiscal competencies which can be related to specific administrative levels. Thus the competencies, when articulated in the form of in-service training materials, can be customized according to administrative levels (i.e., at the departmental level, at the middle level of administrators such as deans, and at the institutional level such as the chief academic officer).

The findings also provided several indicators which would permit additional curricula customization according to the type of institution where the administrator is employed. The findings relating to size analysis, while not as conclusive as the findings for administrative level or institution type, indicated at least nine competencies whose related in-service training materials might deserve customization. At least three narrative comments volunteered by the respondents appeared to be potential candidates for inclusion in any in-service curricula.

The findings appear to be sufficiently comprehensive and specific that a Colorado-unique set of training materials could be developed from the study. However, the survey results would, in the opinion of the researcher, be applicable to any state which has similar budgetary processes and governance structures.[2] Any in-service training program, however, would probably be most effective if modified to meet the needs of a given institution or a group of institutions within the same governance structure. The governance structure is important because the level of centralization could move the level of detailed skill up or down the administrative structure with respect to the response profile reported in Colorado. For example, if in a given state the level of centralization is much greater than is currently found in Colorado, it is conceivable that the response patterns of level II administrators in that state would be more like Colorado level I administrators'.

Another factor which would have to be taken into account is the wide range of state-wide budgetary processes found in the United States. Some states have very detailed, line-itemed appropriation legislation while others provide funds in aggregated lump sum amounts which can be expended either by formula or by individual management discretion. Each variable could result in a change in the response profile reported in Colorado.

The survey results, therefore, suggest that a national study, or perhaps a series of studies of carefully selected states representing materially different budgetary or governance mechanisms, could provide the data for a generalized curriculum package which in turn could be customized to a given state by utilizing a developed set of modification decision rules.

FOOTNOTES

[1]Detailed Knowledge - 1.0; General Knowledge - 3.0; Cursory Knowledge - 5.0; breakpoints between knowledge constraints were labeled 2.0 and 4.0.

[2]Detailed with many line items, headnotes, and footnotes; very strong executive or legislative branch; state-wide coordinating agency with limited regulatory powers.

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